



MARSHALL STAR

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May 8, 2008

Shuttle Propulsion Office test fires reusable solid rocket motor

By Sanda Martel

NASA's Space Shuttle Program successfully conducted a test firing of a space shuttle reusable solid rocket motor in Utah on May 1.

"This test is an example of the aggressive testing program NASA pursues to assure flight safety," said David Beaman, manager of the Marshall Center's Reusable Solid Rocket Booster Project, which manages the tests. "It also allows us to gather information on how motors with different ages perform."

The test firing of Flight Verification Motor 2 evaluated possible performance changes as motors age. Space shuttle solid rocket motors are certified for flight for five years from their date of manufacture. At more than seven years of age, the four-segment motor tested May 1 is the oldest ever fired. The test further



Fire and smoke billow from a space shuttle reusable solid rocket motor test May 1 at a Utah test facility.

See Test on page 4



Discovery arrives at launch pad

An aerial view of space shuttle Discovery, secured atop a mobile launch platform, as it is moved into position at Launch Pad 39A at NASA's Kennedy Space Center, Fla. The shuttle arrived at the launch pad at 3:25 a.m. CDT May 3 and was secured by 5:06 a.m. The 13-day STS-124 mission is the second of three flights to deliver components of the Japan Aerospace Exploration Agency's Kibo laboratory to the International Space Station. Launch is targeted for May 31.



See orbiter assembly photo on page 2

Schumacher named director of Office of Strategic Analysis and Communications

Dr. Daniel M. Schumacher has been appointed to the Senior Executive Service position of director in the Office of Strategic Analysis and Communications at the Marshall Center. In this position, he will lead the development of an integrated strategic analysis, planning and communications capability to facilitate key center decisions and relationships based on business knowledge, performance assessment, priority and strategy.

The Senior Executive Service is the personnel system covering top managerial positions in approximately 75 federal agencies.

Schumacher began his NASA career in 2001 as an aerospace engineer in Marshall's Second Generation Launch Vehicle Program Office. In 2003, he was named manager of Systems Engineering, Integration and Test for the X-37 Project Office. Schumacher accepted a one-year assignment at NASA Headquarters where, among other duties, he served as the chief engineer's representative on the Nunn-McCurdy congressional review of the National Polar-Orbiting Operational Environmental Satellite System.

After completing his Headquarters assignment, Schumacher accepted another developmental assignment at Marshall as manager of the Exploration Flight Projects Office. He also served as deputy project manager of the Lunar Lander Project Office overseeing the activities of over 60 civil servants and contract employees and managing an annual budget of approximately \$13 million and over \$60 million in technology development for the project. Prior to joining NASA, Schumacher was a systems engineer with the U.S. Air Force, the U.S. Space and Missile Defense Command, and XonTech Inc. in Van Nuys, Calif.

Schumacher earned a bachelor's degree in industrial engineering from Texas A&M University in College Station, Texas, and a master's degree and a doctorate in engineering from the University of Alabama in Huntsville. Throughout his 19 years of federal service, he has received numerous awards, including an Achievement Medal for Civilian Service and several group achievement and special service awards.

Schumacher was accepted into NASA's SES Candidate Development Program in 2006 and has completed management and leadership courses at NASA, Georgetown University in Washington, and the Center for Creative Leadership in San Antonio, Texas.



Daniel Schumacher



Space shuttle Discovery mated to external tank, rocket boosters

Space shuttle Discovery, targeted for a May 31 launch date on the STS-124 mission, rolled into the Vehicle Assembly Building at NASA's Kennedy Space Center, Fla., April 26, where it was mated with the external tank and two solid rocket boosters. The fully assembled space shuttle underwent final checkouts in the Vehicle Assembly Building before rolling out to Launch Pad 39A on May 3.

Reunion Weekend to be held at U.S. Space & Rocket Center on July 18-19

The U.S. Space & Rocket Center will host a special Reunion Weekend on July 18-19, which includes the fifth annual Saturn/Apollo Reunion and the second annual Space Camp Hall of Fame dinner. Both

events will be held in the Davidson Center for Space Exploration.

Individual ticket prices for the Saturn/Apollo Reunion are \$10 for adults and \$5 for children. Tickets for the Hall of Fame Dinner

are \$40 each.

For more information and to register, go to <http://www.spacecamp.com/reunionweekend/>. Check the Web site periodically for updates.

Send your name to the moon with new lunar mission

From a NASA Headquarters news release

NASA invites people of all ages to join the lunar exploration journey with an opportunity to send their names to the moon on board the Lunar Reconnaissance Orbiter, or LRO, spacecraft.

The Send Your Name to the Moon Web site enables everyone to participate in the lunar adventure and place their names in orbit around the moon for years to come. Participants can submit their information at <http://www.nasa.gov/lro>, print a certificate and have their name entered into a database. The database will be placed on a microchip that will be integrated onto the spacecraft. The deadline for submitting names is June 27.

"This is a great activity to do with your kids to enhance their curiosity of the space program, or with family members who watched the first moon shots live on TV decades ago," said Larry Hill, LRO mission manager at Marshall. "While most of us will never have the opportunity to leave our footprints in the lunar dust, when LRO begins sending back astonishing new information about the lunar environment paving the way for human's return, it will be inspiring to have your name be part of that legacy."

The orbiter, comprised of six instruments and one technology demonstration, will provide the most comprehensive data set ever returned from the moon. The mission will focus on the selection of safe landing sites and identification of lunar resources. It also will

study how the lunar radiation environment could affect humans. LRO will also create a comprehensive atlas of the moon's features and resources that will be needed as NASA designs and builds a planned lunar outpost.



"Everyone who sends their name to the moon, like I'm doing, becomes part of the next wave of lunar explorers," said Cathy Peddie, deputy project manager for LRO at NASA's Goddard Space Flight Center in Greenbelt, Md. "The LRO mission is the first step in NASA's plans to return humans to the moon by 2020, and your name can reach there first."

How cool is that?"

The Lunar Reconnaissance Orbiter is one of two pathfinding robotic missions to the moon managed by NASA's Lunar Precursor Robotics Program at Marshall for NASA's Explorations Systems Mission Directorate in Washington. The Lunar Reconnaissance Orbiter is co-manifested with the Lunar Crater Observation and Sensing Satellite, LCROSS, and scheduled for launch in late 2008. Together, these two missions will extend our knowledge of the lunar environment, provide a foundation for upcoming science missions and support future human exploration.

Send Your Name to the Moon is a collaborative effort among NASA, the Planetary Society in Pasadena, Calif., and the Johns Hopkins Applied Physics Laboratory in Laurel, Md.

'Focus on Marshall': Get a bird's-eye view of renovations at the Dynamic Test Stand, visit NASA's newest operations center

By Lori Meggs

As engineers prepare to update Marshall's historic Dynamic Test Stand, the May episode of "Focus on Marshall" gives viewers an inside look at future plans to bring the facility back on line as one of NASA's full scale testing facilities for Ground Vibration Testing.

The 360-foot-high test stand in the East Test Area, used in the 1960s to test the Apollo-era Saturn V rocket and later the integrated space shuttle system, soon will be used for the integrated vehicle ground vibration test of the Ares I rocket and Orion crew capsule. The Ares I is an in-line, two-stage rocket designed to carry the Orion capsule and launch future explorers into space.

The episode also takes you to the opening of the Gamma-ray Large Area Telescope Burst Monitor Instrument Operations Center at the National Space Science and Technology Center in Huntsville. The operations center will be the focal point for observing gamma ray bursts – the most powerful explosions in the universe. Viewers will see why this science is so important to NASA's mission and Marshall's role in the multi-center project.

"Focus on Marshall" is broadcast on Marshall TV and will air on May 8, 20 and 22 at 11 a.m., noon and 1 p.m. It also is available on NASA TV, Inside Marshall and on the NASA Portal.

Meggs, an ASRI employee, supports the Office of Strategic Analysis & Communications.

Obituaries

Richard "Dick" Leslie Lowery, 75, of Huntsville died April 24. He retired from the Marshall Center in 1988 as an engineer. He is survived by his wife Patricia Lowery.

Warren S. Streeter, 85, of Huntsville died April 27. He retired from the Marshall Center in 1985 as an aerospace engineer technician. He is survived by his wife Ann Streeter.

Marshall TV's James Bilbrey earns 2007 NASA Videographer of the Year Award

Marshall Television Services videographer James Bilbrey was named the 2007 NASA Videographer of the Year in the documentation category at the National Association of Broadcasters convention in Las Vegas, Nev., on April 15.

Bilbrey won first place for his documentary work on Ares I-related activities for the Ares Quarterly Reports produced at Marshall. He works for Honeywell Technical Services Inc., which operates Marshall TV under NASA's UNITEs contract at the Marshall Center.

Although Bilbrey knew he had won something in the competition, it wasn't until the very last moment in the ceremony that the 10-year veteran of Marshall TV learned that he had secured a first-place trophy.

"I just want to say how proud, happy and thrilled I am to receive this award," Bilbrey said. "I couldn't have done it without my co-workers, Anthony Orton, Carver Myhand and Sarah Milligan, because shooting great video is a team effort."

"We started this award as a way to recognize the talent behind the camera, the men and women whose work becomes a part of the history of the agency," said Rodney Grubbs, NASA digital TV program manager. "Our judges always comment how difficult it is for them to choose just one entry and are always impressed by the quality work they review. Winners should be very proud of their accomplishment — the competition is always close!"

"Marshall TV has placed in this competition since it started, and James has previously won third and second place awards, but I knew that it was just a matter of time before our team brought home the first place trophy," said Marshall TV manager George Baker for Honeywell Technical Services Inc.

The competition, established five years ago, salutes talented videographers from across the country who support America's space program.

This month in history ...

As part of a continuing effort to mark NASA's 50th anniversary on Oct. 1, and to promote awareness of the Marshall Center's own upcoming 50th anniversary in 2010, Inside Marshall is posting a vintage edition of the Marshall Star each Thursday. To read a copy of the newspaper dated Oct. 5, 1960, go to http://inside.msfc.nasa.gov/announcements/star_50-2.html. That edition includes stories about Marshall's work on a unique rocket-borne television system. The newspaper also reported that Marshall employment was at 5,456 persons.



Test

Continued from page 1

substantiates the certification that was established by NASA at the beginning of the shuttle program.

The test also provided important information for continued launches of the shuttle and development of the Ares I rocket, a key component of NASA's Constellation Program that will launch the Orion crew vehicle on missions to the moon.

The test measured external sound, or acoustics, to help define motor-generated external loads for Ares I. This valuable data will assist in the final design of the launch structure for Ares I rockets by engineers from NASA and ATK Launch Systems Group of Promontory, Utah.

Preliminary indications are that all test objectives were met. After final test data are analyzed, results for each objective will be published later this year.

The test provided a unique opportunity to compare performance data from two motors of different ages to validate mid-life and full-life certification of their components. The segments tested May 1 were originally stacked at NASA's Kennedy Space Center in Florida in 2002 and returned to Utah in 2004. As a result of this test, engineers will better understand the effects of aging and exposure

to different climates for extended periods of time.

Each space shuttle launch requires the power of two reusable solid rocket booster motors to lift the 4.5-million-pound shuttle vehicle. They burn for approximately 123 seconds and generate an average thrust of 2.6 million pounds. In the May 1 test, the motor generated 3.3 million pounds maximum thrust for two minutes, which is the same time each reusable solid rocket motor burns during a space shuttle launch.

The space shuttle reusable solid rocket motor is the largest ever to fly. It is the only solid rocket motor rated for human flight and the first designed for reuse. Two motors provide 90 percent of the thrust needed to launch the space shuttle.

The Reusable Solid Rocket Booster Project Office manages the tests. ATK Launch Systems Group, a unit of Alliant Techsystems Inc., manufactures space shuttle solid rocket motors.

For more information about the Space Shuttle Program, visit <http://www.nasa.gov/shuttle>.

For more information about the Constellation Program, visit <http://www.nasa.gov/constellation>.

Martel, an ASRI employee, supports the Office of Strategic Analysis and Communications.

Jaiwon Shin to speak at Asian Pacific American program

In observance of Asian Pacific American Heritage Month, the Marshall community is invited to join in this year's celebration.

Dr. Jaiwon Shin, associate administrator of NASA's Aeronautics Research Mission Directorate, will be the keynote speaker. Shin manages the agency's aeronautics research portfolio and guides its strategic direction. This portfolio includes research in the fundamental aeronautics of flight, aviation safety and the nation's airspace system.

The annual program will be held at 10:30 a.m. May 13 in Morris Auditorium, Building 4200. The theme of the 2008 celebration is

"Leadership, Diversity and Harmony — Gateway to Success." A reception will immediately follow the program.

For details, contact Dr. Alan Chow, chairman of Marshall's Asian Pacific American Advisory Group, at 544-7107 or alan.chow@nasa.gov; or Willie Love, assistant director of Marshall's Office of Diversity and Equal Opportunity, at 544-0088 or willie.j.love@nasa.gov.



Jaiwon Shin

Classified Ads

To submit a classified ad to the Marshall Star, go to Inside Marshall, to "Employee Resources," and click on "Employee Ads — Submit Ad." Ads are limited to 15 words, including contact numbers. No sales pitches. Deadline for the next issue, May 15, is 4:30 p.m. Thursday, May 8.

Miscellaneous

Stools, 24-inch counter height, plaid upholstery, no tears/stains, oak legs/rails, \$30. 541-0627

Jenn-Air electric cook top, four burners, grill attachment, \$125. 476-5837

John Deere 2320 tractor, front-end loader, 4WD, 25 hours, \$13,500. 656-0043

Porter-Cable CPF4515 oil-free horizontal air compressor, new air line, \$200. 604-8434

Five wheels for Jeep Wrangler, black-rock crawler wheels, \$225. 931-308-1723

Ham radio equipment, HF and 2M radios, power supplies, antennas, books, \$500. 656-2951

Aluminum shed, 8x10, galvanized base, anchor kit, \$125. 721-7777

Drawtite MaxFrame hitch, #75033, mount ball, pin, fits 1988-2000 GMC/Chevy truck, \$100. 353-4922

Marshall MG50RCD electric guitar amplifier, 50 watts, \$100. 205-394-1307

Barbie Power Wheels Jeep, \$35; McLane 20-inch self-propelled reel mower, \$225 obo. 325-2919

Treadmill, sturdy, space saver, MP3, warranty, non-skid mat, \$700. 348-2142

Clay flower pots, all sizes; Swing-o-Matic baby swing, \$10. 881-6040

10 long-handle tools, post-hole digger, \$100. 881-6040

Sunroof visor, for 2006-2008 Honda Civic sedans, \$50. 541-4991

Whirlpool side-by-side refrigerator/freezer, white, transferable four-year extended warranty, \$550 firm. 885-1596

Cherry dining room table, six chairs, \$600; Kenmore refrigerator/freezer, filtered water/ice maker, \$600. 489-1673

Thomasville queen bedroom suite, solid wood, mirrored chest, four-post bed, night stand, \$1,500. 325-8958

Oneida silverware, Chalice pattern, seven knives, forks, spoons, salad forks, three soup spoons, \$35. 837-3037

Intex Easy Set swimming pool, 15'x42", accessories, blue vinyl, \$120 obo. 828-5326

Vehicles

2007 C230 Mercedes Benz, black, four door, 1,200 miles, \$27,000. 880-2304

2006 Lexus IS250 sedan, four door, automatic, leather, six cylinder, 12k miles, \$28,500. 519-9326

2006 Honda CRF230F dirt bike, \$2,150. 776-4741

2005 VW Beetle, lime green, sunroof, 26k miles, \$12,250. 883-1953

2004 Cannondale IM 800 triathlon bike, black with gold/silver, \$700. 461-3803

2003 Jeep Cherokee Laredo, 2WD, 58k miles, \$11,000. 655-6701

2003 Jaguar XJ8 Sovereign, loaded, CarFax, title, \$16,999. 797-8895

2002 Chevy Suburban, 4WD, gray, quad seating, rear air, \$12,500. 656-0043

2001 Honda CRV LX, black/gray, 101k miles, \$7,900. 883-6894 or 468-6894

1999 Toyota 4-Runner Limited Edition, white, brown interior, sunroof, CD, A/C, \$7,000. 694-1260

1999 Lexus RX300, auto climate, tan leather, heat-controlled seats, CD-changer, moonroof, 160k miles, \$7,800. 468-6261

1999 Chevrolet Z71 LT, extended cab, leather interior, higher mileage, \$7,700 obo. 468-0612

1997 Toyota Camry LE, \$3,000. 426-9066

1997 24-foot Coachman Catalina Lite, A/C, heat, full kitchen/bath, hot water heater, awning, \$5,300. 830-5285

1992 Honda Accord EX, five speed, 275k miles, \$750. 931-703-5956

1991 Mitsubishi pickup, four-speed standard transmission, CD player, 118k miles, \$900. 882-1904

1982 Cadillac Coupe de Ville, new upholstery, 80k miles, \$2,000 obo. 520-3740

Wanted

20-30 gallon aquarium, cover, light, guaranteed not to leak. 859-9165

Chicken litter, approximately 200 pounds, prefer near Scottsboro. 259-2164

Used Bowflex, great condition. 755-2358

Ladies' 26-inch three-speed bicycle, AMF Hercules/Free Spirit style, 1960s-70s preferred. 534-2368

Baby bed, stroller, car seat, high chair, Pack-and-Play, bassinet, baby girl items, changing table. 931-625-0671

Young rocketeers fly high during Student Launch Initiative on April 26



Doug Stoffer/MSFC

Students from Byron High School in Byron, Ill., ready a rocket for liftoff, as a scale model of NASA's Ares I rocket rises behind them — a fitting visual centerpiece for NASA's 2007-2008 Student Launch Initiative, held April 26 at Bragg Farms in Toney, Ala. Sixteen middle school and high school teams launched their classroom creations at the event.



Doug Stoffer/MSFC

A sleek red and black rocket built by Millington High School students from Millington, Mich., thunders off the launch pad. The Student Launch Initiative challenges each team not just to build a unique launch vehicle and fly it to an altitude of 1 mile, but also to load the rocket with an equally original science payload. Some teams devise instruments to measure air quality; others build payloads that deploy miniature robot "landers." Teams must retrieve their payloads intact and submit reports on their findings to NASA.



Doug Stoffer/MSFC

Students from St. Andrews Lutheran School in Park Ridge, Ill., discuss their homemade rocket with veteran NASA astronaut Jim Halsell, a five-time space shuttle mission commander. Halsell, now vice president and program manager for the Ares I Upper Stage team at ATK Launch Systems in Huntsville, joined members of the Marshall Center team to inspect the students' hard work at the Student Launch Initiative rocket fair April 25 in the lobbies of Buildings 4200 and 4203 at Marshall.



Emmett Given/MSFC

Spectators track another student-built rocket as it lifts skyward. Despite sporadically cloudy skies over Bragg Farms, all 16 student teams successfully launched their rockets. The Student Launch Initiative and its sister event, the University Student Launch Initiative for college and university teams, are organized annually for NASA by the Marshall Center's Academic Affairs Office, part of the Office of Human Capital.

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